Course Title: Calculus II for Techs.
Meeting Times: T, R 4:50 – 6:05 Location: UT 320
Instructor: Aaron Gold
- Email: aagold@hartford.edu
- Phone: 860.778.7032
- AIM®: drumrdrumr, agold1AtWork
- Office Hours: Tuesday 6:05–7:30 pm
  Other Days and Times by Appt.
Text Books: Technical Calculus with Analytic Geometry
Prerequisites: MTH 232
Blackboard Course: MTH241: Calculus II for Techs. [Gold, Fall '06]

Course Objectives:
- Continue the students’ education in topics related to calculus.
- Acquire experience in problem-solving.
- Create an understanding of the use and application of mathematical operations in technology courses.
- Promote retention of learned material through constant review.
- Promote confidence on the part of the student in his/her ability to master mathematical problems as applied to technology courses.

Materials You Will Need:
- Text Book (see above)
- Access to a Computer
- TI-86 or Equivalent Calculator
- You !!!
- You !!!
- and, You !!!

The Way It Works:
- Show up to class.
  - Attendance is mandatory and will be recorded every class period.
  - Repeated unexcused absences will result in failure.
- Show up to class on time.
  - Or at least before the instructor. On time.
- Don’t cheat.
  - If you think you are cheating, you probably are.
  - If you get caught cheating, you will fail.
- Examples of cheating:
  - Copying someone else’s homework. Working together is ok, only if both partners are contributing.
  - Wandering eyes during quizzes and tests. If you have a lazy eye, please tell the instructor prior to beginning the examination.
  - Bribing the instructor…
• Consult *The Source* (see the instructor if you need a copy) if you wish to get a better idea on the University’s policy on cheating. The University takes it seriously. Duh.

♦ Be prepared for class

• Read the appropriate sections of the text before coming to class. You can then ask informed questions about the material.

• The instructor will demonstrate problems in lecture; students may be called upon to perform “at the board” as well. If you have serious problems speaking in front of others, please advise the instructor accordingly at the beginning of the semester.

• If time permits, students will either be given in-class assignments or time in class to begin homework problems; if so, that time must be utilized wisely; i.e. skipping (or running, walking, crawling, etc.) out of class early does not constitute wisely.

• Solutions are more important than answers. Even if you understand the answer to a problem and it looks right, make sure you know how to complete the process so you will be able to apply it to other problems.

• Make sure you take appropriate notes on how you complete (or the instructor completes) in-class problems; it may seem simple in class, but the details may be fuzzy when you try to do the problems on your own.

♦ Do your homework.

• Homework is due Tuesdays at the beginning of class, and may not be turned in late. Some credit will be given for completing the problems; however, certain problems will be graded for accuracy.

• The answers for many assigned problems are in the back of the textbook, so check your work for those problems before coming to class – then ask questions in class if your answers don’t agree with the author’s. Remember: solutions are more important than answers.

• Complete extra problems whenever possible – this will help prepare you for quizzes and tests.

♦ Quizzes

• Short, unannounced quizzes will be given every three or four lectures. They will cover topics/problems covered in lecture and via homework.

• These quizzes, as well as the homework, should help prepare both the student and instructor for the tests.
Tests/Exams

- After every few chapters of the text, there will be a test, which will consist of problems similar to those in the homework and quizzes.
- Tests may consist of multiple choice questions, short answer, long answer, medium answer, easy answer, hard answer, impossible answer. Show your work on every problem.

Schedule of Topics:

1. **Integration** (6.25 hours)
   - Differentials
   - Antiderivatives
   - The indefinite integral
   - The area under a curve
   - The definite integral
   - The trapezoidal rule
   - Simpson's rule

2. **Applications of Integration** (6.25 hours)
   - Applications of the indefinite integral
   - Areas by integration
   - Volumes by integration
   - Centroids
   - Moments of inertia
   - Work by a variable force
   - Force due to a liquid pressure
   - Other applications

3. **Integration by Standard Forms** (3.75 hours)
   - The general power formula
   - The basic logarithmic form
   - The exponential form
   - Basic trigonometric forms
   - Other trigonometric forms
   - Inverse trigonometric forms

4. **Methods of Integration** (7.5 hours)
   - Integration by parts
   - Integration by substitution
   - Integration by trigonometric substitution
   - Integration by partial fractions: nonrepeated linear factors
   - Integration by partial fractions: other cases
   - Integration by use of tables
   - Improper integrals
5. **Introduction to Double Integrals** (1.25 hours)
   - Double integrals

6. **Expansion of Functions in Series** (1.25 hours)
   - Fourier Series

---

**Grading Information**

Your final grade will consist of the following:

- 25% Homework
- 20% Quizzes
- 50% Exams
  - 15% Each for Exam 1 and Exam 2
  - 20% Final Exam
- 5% Attendance, Effort, Attitude, Etc.

**Ways to Improve your Grade**

- Show up to class, do your homework, study.
- Don’t just look at math problems; examine the process by which they were completed. Has it yet been mentioned that solutions are more important than answers?
- Other extra credit *may or may not* be available. You will be advised when these opportunities arise.

---

**Final Grading:**

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>94-100</td>
</tr>
<tr>
<td>A-</td>
<td>90-93</td>
</tr>
<tr>
<td>B+</td>
<td>87-89</td>
</tr>
<tr>
<td>B</td>
<td>84-86</td>
</tr>
<tr>
<td>B-</td>
<td>80-83</td>
</tr>
<tr>
<td>C+</td>
<td>77-79</td>
</tr>
<tr>
<td>C</td>
<td>74-76</td>
</tr>
<tr>
<td>C-</td>
<td>70-73</td>
</tr>
<tr>
<td>D+</td>
<td>67-69</td>
</tr>
<tr>
<td>D</td>
<td>64-66</td>
</tr>
<tr>
<td>D-</td>
<td>60-63</td>
</tr>
<tr>
<td>F</td>
<td>&lt; 60</td>
</tr>
<tr>
<td>F</td>
<td>&lt; 60</td>
</tr>
</tbody>
</table>
Important Semester Dates:

8.29.06  Tuesday  First Day of Classes
9.4.06   Monday  Labor Day – University Holiday
9.11.06  Monday  Last day to change from audit to credit status
9.18.06  Monday  Last day to drop a course and have it deleted from your record
10.13.06 Friday  Homecoming
Last day to file January degree applications
Parents Weekend
11.1.06  Wednesday  Advance Registration Begins
11.6.06  Monday  Last day to change from credit to audit status
Last Day to Change from P/NP to letter grade or vice-versa
Last Day to Change from Credit Status to Audit Status
11.21.06 Tuesday  Thanksgiving Break Begins
11.27.06 Monday  Classes resume after Thanksgiving Break
12.11.06 Monday  Spring 2005 Classes End
Last day to resolve I grades from preceding term
12.12.06 Tuesday  Reading Day
12.13.06 Wednesday  Final Exams Begin
12.14.06 Thursday  MTH 241 Final Exam
12.19.06 Tuesday  Final Exams End

Note: This is only a partial listing of Academic Events. For a more complete list, visit http://www.hartford.edu/newsevents/calendar/academic.asp?sect=Academic